

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A data transmission method for enclosed environments, ~~such as a mine,~~ the data transmission method being used in a data transmission system comprising one or more terminals (18) and a network (20) comprising at least one base station (17), a monitoring station (10 to 12) and a backbone network (15), the data transmission system having a radio connection between the terminal (18) and the base station (17) and a bi-directional connection from the monitoring station (10 to 12) to one or more working machines (19) via the terminals (18), each of which are coupled to a working machine (19), ~~characterized in that~~ comprising transmitting data between the monitoring station (10 to 12) and the one or more terminals terminal (18) is transmitted digitally, and controlling the one or more working machines (19) ~~are controlled~~ from the monitoring station (10 to 12) by teleoperation substantially in real time by a deterministic data transmission protocol in which the data transmission delay is within predetermined limits.

2. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~ further comprising operating the network (20) operates on the multicasting principle, whereby transmitted messages are forwarded to more than one units unit connected to the network.

3. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~ further comprising performing data transmission is performed in the network (20) as in an ATM network.

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4. (Currently amended) A method as claimed in claim 3, ~~characterized in that~~
further comprising operating the ATM network (20) operates on the multicasting
principle by ~~the~~ ATM switches (14) operating independently without control.

5. (Currently amended) A method as claimed in claim 3, ~~characterized in that~~
further comprising operating the ATM network (20) operates on the multicasting
principle so that ~~the~~ ATM switches (14) are under centralized control.

6. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~
wherein transmitted messages are forwarded to all units connected to the network.

7. (Currently amended) A method as claimed in claim 1, ~~characterized in that a~~
further comprising establishing the connection between the terminal (18) and the base
station (17) ~~is established~~ by wireless spread spectrum signalling.

8. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~
wherein data is transmitted in broadband, and in data transmission one or more of the
following information types are transmitted substantially simultaneously: image, voice,
data.

9. (Currently amended) A method as claimed in claim 8, ~~characterized in that~~
wherein in data transmission image, voice and data are transmitted in packets.

10. (Currently amended) A method as claimed in claim 8, ~~characterized in that~~
wherein each terminal (18) has a fixed data transmission band, in which ~~in~~ data
transmission is allocated to image, voice and data.

11. (Currently amended) A method as claimed in claim 8, ~~characterized in that~~
further comprising compressing image and/or voice ~~are compressed~~ for data
transmission.

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12. (Currently amended) A method as claimed in claim 11, ~~characterized in that~~ wherein image is dynamically compressed.

13. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~ further comprising in data transmission establishing logical connections ~~are established~~ between the units by a graphic user interface.

14. (Currently amended) A data transmission system to be used in enclosed environments, ~~such as a mine~~, the data transmission system comprising one or more terminals (18) and a network (20) comprising at least one base station (17), a monitoring station (10 to 12) and a backbone network (15), the data transmission system having a radio connection between the base station (17) and the one or more terminals ~~terminal (18)~~ and a bi-directional connection from the monitoring station (10 to 12) to the one or more terminals (18) which are coupled to a working machine (19), ~~characterized in that~~ the data transmission system is being arranged to transmit data digitally between the monitoring station (10 to 12) and the one or more terminals ~~terminal (18)~~, and the data transmission system comprises a deterministic data transmission protocol by which one or more working machines (19) can be controlled by teleoperation substantially in real time and in which the data transmission delay is within predetermined limits.

15. (Currently amended) A data transmission system as claimed in claim 14, ~~characterized in that~~ wherein the network (20) is arranged to operate on the multicasting principle, whereby transmitted messages are forwarded to substantially all units connected to the network.

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16. (Currently amended) A data transmission system as claimed in claim 14, ~~characterized in that~~ wherein the network (20) is substantially an ATM network.

17. (Currently amended) A data transmission system as claimed in claim 16, ~~characterized in that~~ wherein the ATM network (20) is arranged to operate on the multicasting principle, whereby ~~the~~ ATM switches (14) operate independently without separate control.

18. (Currently amended) A data transmission system as claimed in claim 16, ~~characterized in that~~ wherein the ATM network (20) is arranged to operate on the multicasting principle, whereby ~~the~~ ATM switches (14) can be controlled in a centralized manner.

19. (Currently amended) A data transmission system as claimed in claim 14, ~~characterized in that~~ wherein the data transmission system is arranged to forward transmitted messages in a restricted manner to one or more units connected to the network.

20. (Currently amended) A data transmission system as claimed in claim 14, ~~characterized in that~~ wherein in the data transmission system ~~is arranged to establish a connection~~ is established between the terminal (18) and the base station (17) by wireless spread spectrum signalling.

21. (Currently amended) A data transmission system as claimed in claim 14, ~~characterized in that~~ wherein the data transmission system is arranged to perform data transmission in broadband, and that in data transmission the data transmission system is arranged to transmit substantially simultaneously one or more of the following information types: image, voice, data.

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22. (Currently amended) A data transmission system as claimed in claim 21, ~~characterized in that in data transmission~~ wherein the data transmission system is arranged to transmit image, voice and data in packets.

23. (Currently amended) A data transmission system as claimed in claim 21, ~~characterized in that~~ wherein each terminal has a fixed data transmission band ~~which the data transmission systems is arranged to allocate~~ in which data transmission is allocated to image, voice and data.

24. (Currently amended) A data transmission system as claimed in claim 21, ~~characterized in that~~ wherein the data transmission system is arranged to compress image and/or voice for data transmission.

25. (Currently amended) A data transmission system as claimed in claim 24, ~~characterized in that~~ wherein the data transmission system is arranged to compress image dynamically.

26. (Currently amended) A data transmission system as claimed in claim 14, ~~characterized in that~~ wherein in the data transmission system ~~is arranged to establish~~ logical connections are established between the units by a graphic user interface.

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